



U.S. ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 SIXTH AVENUE
SEATTLE, WASHINGTON 98101

APR 05 1989

REPLY TO
ATTN OF:

WD-135

Ruth Nelson, General Counsel
Unimar International
1441 Northlake Way
Seattle, Washington 98103

Re: Bottom Sediment Sampling Plan

Dear Ms. Nelson:

The referenced plan, received February 8 has been reviewed. We only have a few comments to add to Richard Koch's as set forth in his February 3 letter to Mr. Miller (copy enclosed).

Bioassays: Joe Cummins of EPA's Region 10 laboratory pointed out that the samples to be split (for parallel bioassay and chemical analysis) need to be homogenized prior to splitting. Such homogenization may in fact have been intended but, as it may be critical to the validity of the results, the intent should be plainly stated in the study plan.

Since the bioassay analysts (FishPro) were involved in development of the plan, careful timing of delivery to the lab and initiation of testing has probably also been considered. Again, the intent should be clearly stated. Delivery to the lab within 3 days (page 2) is not satisfactory. Analysis should commence not later than 72 hours after sampling and, with unknown and potentially volatile contaminants, 36 hours should be considered the maximum. The time elapsed for each individual sample needs to be carefully tracked.

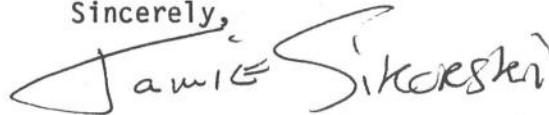
The daphnia test period proposed (10 days) is somewhat longer than normal (2-4 days) but may be acceptable provided the procedures include feeding to prevent cannibalization within the daphnia community.

Benthic analysis: The proposed procedure differs in several possibly significant ways from the Puget Sound protocols (enclosed) including the type of sampler (Ponar vs. modified Vec Veen) and the sampling depth (5cm vs. 15-16cm). A critical factor here is to assure a sufficient sample area and volume. We recommend 0.1 square meter and 0.1 cubic meter. Since these samples will be split, a larger sample (or more samples per site) may be necessary and should be considered.

We understand and are sympathetic to Unimar's desire to minimize the costs of this study. However, Unimar has accepted responsibility for the deposition in Lake Union of materials which may be detrimental to the biota. The purpose of the study - from Unimar's perspective - is to demonstrate that the material may safely remain on the bottom of Lake Union since no adverse effects are occurring. At some point, economies may produce only inconclusive results. We are far past the schedule for removal set out in the Consent Decree and, unless the study provides sufficient evidence of nonsignificance, we will be unable to support modification of the decree. Hence, it is in Unimar's best interest to insure a thorough and complete benthic study.

Please provide us with the updated plan, reflecting the above comments as well as those of Richard Koch, by April 24. Please address questions to Grover Partee, Water Compliance Section. He may be contacted at 442-1755, in Seattle.

Sincerely,

A handwritten signature in dark ink, reading "Jamie E. Sikorski". The signature is fluid and cursive, with the first name "Jamie" and last name "Sikorski" clearly legible.

Jamie E. Sikorski, Acting Chief
Water Compliance Section

Enclosures

cc: Richard Koch (Ecology, NWRO)